



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,528	03/28/2001	Hideaki Yagi	Q63199	2879

7590 02/18/2003

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3202

EXAMINER

TUNG, TA HSUNG

ART UNIT	PAPER NUMBER
----------	--------------

1753

4

DATE MAILED: 02/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/818,528

Applicant(s)

YAGI

ITAL

Examiner

T. TUNG

Group Art Unit

1753

Paper No. 4

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-18 is/are pending in the application.
- ☐ Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-18 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☒ All ☐ Some* ☐ None of the:
 - ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

Art Unit: 1102

Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In the independent claims, the language does not point out the invention in that it does not set forth any key structural distinction over prior art. The point of novelty appears to be expressed in terms of operation (e.g. the last paragraph of claim 1), which is improper for an apparatus claim.

Claim 2, line 2, "porous body having a bore diameter in a range of 0.01 μ m to 1 μ m" is indefinite in that it is unclear if it calls for the entire porous body to have a diameter in this range or the porous body have pores with each pore having a diameter in this range.

Claim 5 does not appear to be a proper dependent claim of claim 4. Claim 4 already sets forth the anode to be of Pt or a Pt alloy. Thus, a dependent claim (claim 5) may not call for the anode to be of Pd or a Pd alloy.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7-14, 16, 17 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Japan 05-087773.

Art Unit: 1102

Japan discloses a plurality of anodes and cathodes that are presumably porous. Each cathode has a diffusion control means 27 that is a part of an electrical lead extending between the cathode and an inlet 6. See figure 1 and the English abstract. In terms of actual structure, applicant's claims are seen to describe at best an obvious variant of Japan.

A translation of Japan '773 has been ordered with the PTO translation section. If applicant has a full translation or is aware of an English equivalent, he should submit a copy of the same with his response in case the ordered translation is not timely available.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 7-14, 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan '773 in view of Friese et al 5,368,713.

Applicant's claims differ by calling for the diffusion porous body to have a pore diameter of 0.01 micron to 1 micron.

Friese discloses a diffusion body 12 with pores 13 that each has a diameter as low as 0.2 micron. See col. 3, line 15. It would have been obvious for Japan to adopt the pore diameter of the Friese diffusion body, since the incorporation of well-known features from totally analogous prior art is within the skill of the art in the absence of unexpected result.

Art Unit: 1102

In regard to claim 3, the adopted pore diameter would inherently provide Knudsen diffusion.

Claims 15, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan '773, with or without Friese et al, in view of Kato et al 5,866,799.

These claims differ by calling for the cathodes to share a common anode.

Kato discloses electrodes 28 and 22 sharing a common electrode 24. See figure 2; col. 11, line 3 to col. 12, line 60. It would have been obvious for Japan to adopt a common anode configuration in view of Kato, since the elimination of an electrode saves material cost as well as sensor space.

Claims 5, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan '773 in view of Friese et al and Radford et al 3,843,400.

These claims differ by calling for the anode to be made of Pd or Pd alloy.

Radford discloses Pd to be equivalent to Pt as a well-known electrode material for a solid electrolyte sensor. See col. 4, line 3. It would have been obvious for Japan to adopt Pd as the anode material in view of Radford, since the substitution of art-recognized equivalents is within the skill of the art.

Claims 3, 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan '773 in view of Friese et al and Kimura et al 4,224,113.

These claim further differ by calling for the diffusion control to effect Knudsen diffusion.

Art Unit: 1102

Kimura discloses Knudsen diffusion for a solid electrolyte sensor. See col. 11, lines 15-19. It would have been obvious for Japan to adopt Knudsen diffusion in view of Kimura, since the incorporation of well-known features from analogous prior art is within the skill of the art in the absence of unexpected result.

Claims 5, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan '773 in view of Friese et al, Kimura et al and Radford et al.

These claims additionally differ by calling for a Pd anode. As discussed before, Radford renders that obvious.

The examiner can be reached at 703-308-3329. His supervisor Nam Nguyen can be reached at 703-308-3322. Any general inquiry should be directed to the receptionist at 703-308-0661. A fax number for TC 1700 is 703-872-9310.



Ta Tung

Primary Examiner

Art Unit 1753